

ESD Protection Configuration and Method for Light Emitting Diodes

Abstract of the Disclosure

This invention relates to an ESD protection configuration and method for light emitting diodes (LED), including an LED, having a p-n junction and connected to a circuit substrate, the circuit substrate having two p-type substrates and one n-type substrate therein; a first ESD protection configuration, built-in the circuit substrate and including a first resistor, a first capacitor and a first diode that are connected in series and then engage a parallel connection with the LED, wherein the first diode has a p-node connected to an n-node of the LED; and a second ESD protection configuration, built-in the circuit substrate and including a second resistor, a second capacitor and a second diode that are connected in series and then engage a parallel connection with the LED and the first ESD protection configuration, wherein the second diode has a p-node connected to the p-node of the LED, whereby such a configuration absorbs and removes ESD induced upon human contact and prevents the LED from burning to effectively extend the lifespan of the LED.